

arium of the Departamento do Botânica do Estado at São Paulo, Brazil.

Citations: BRAZIL: Matto Grosso: F. C. Hoehne, Com. Rondon 4739 (N--isotype, N--photo of type, Sp--type, Z--photo of type).

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ADDITIONAL NOTES ON THE GENUS BOUCHEA. III

Harold N. Moldenke

Since the publication of my monograph of this genus and the first two series of additional notes thereto, numerous additional specimens have been examined and supplementary information has come to light. Full explanation of the abbreviations used for the names of herbaria in which specimens are deposited will be found in *Phytologia* 5: 154--159 (1955), 6: 242 (1958), 7: 91-92 (1959), 7: 123--124 (1960), and 7: 343 (1961).

BOUCHEA Cham.

Additional & corrected literature: L., *Syst. Nat.*, ed. 10, 852. 1759; Walp., *Repert. Bot. Syst.* 4: 11--12, 34, & 38--39. 1845; Turcz., *Bull. Soc. Nat. Imp. Mosc.* 36 (2): 199. 1863; Jacks., *Ind. Kew.* 2: 974. 1895; Moldenke, *Alph. List Cit.* 1: 2, 5--8, 10, 11, 13--15, 17, 21, 26, 28--31, 33, 38--41, 45, 48, 49, 52, 53, 55, 57, 62--66, 74, 76, 79, 88, 92, 94, 106, 107, 115, 117, 118, 120, 121, 125, 127, 128, 131, 133, 134, 136, 139, 140, 148, 160--162, 169--171, 177--185, 188--190, 192, 194--198, 202, 203, 208, 209, 212, 216--218, 223, 227, 228, 232--234, 236, 238, 241--243, 247, 248, 250, 255, 258--261, 266, 269, 271--274, 277, 285, 286, 299--303, 305--309, 311--316, 318, 319, 321, & 323--325 (1946), 2: 327--329, 331, 333, 336--338, 340, 342, 344, 346--350, 352, 353, 361, 365, 368, 371, 377, 392, 394, 395, 401--403, 408, 413, 415--417, 422--430, 434, 436, 437, 442, 446--449, 459, 473, 474, 477, 478, 486, 489, 499, 500, 503, 518, 525, 528--530, 533--536, 539--543, 549--553, 557, 558, 561, 563, 564, 570, 578, 595, 596, 601, 603--607, 610--612, 616, 618, 621, 623, 625, 626, 629, 631, 633, 639, 642, 645, & 652 (1948), 3: 653, 654, 656, 658, 659, 663, 664, 666, 670, 675--677, 679, 683--686, 690, 691, 695, 705, 706, 710--714, 716, 717, 720, 722, 726, 729, 730, 738, 741, 748, 749, 754, 755, 759, 766, 768, 772, 779, 783, 785, 786, 788, 789, 796, 798--800, 803, 807, 808, 811, 813, 814, 817--819, 822--826, 828--830, 833, 834, 838, 842, 843, 845, 848, 853--856, 862, 865, 871, 872, 876--878, 883--886, 888--891, 893, 894, 898, 903, 904, 906--908, 911, 915, 918, 919, 921, 923, 924, 927--930, 933, 935, 937--939, 948, 951, 952, 956, 958, 961, 964, 968--970, 974, & 977 (1949), and 4: 979, 981, 982, 991, 993, 995, 997, 1001, 1006, 1010, 1012, 1013, 1015, 1016, 1019, 1020, 1022, 1024--1028, 1030--1033, 1035, 1037--1047,

1050--1057, 1060--1064, 1067--1069, 1071, 1074--1076, 1078, 1081, 1082, 1085, 1087, 1095, 1096, 1106, 1113--1115, 1123, 1124, 1126, 1127, 1130, 1132, 1136, 1143, 1144, 1146, 1148, 1153, 1171, 1172, 1178, 1206, 1208, 1211, 1212, 1215, 1228, 1231, 1232, 1240, 1244, 1246, 1247, 1254, 1286, 1290, 1295, 1297, 1300, & 1301. 1949; H. N. & A. L. Moldenke, *Anal. Inst. Biol. Mex.* 20: 3. 1949; Moldenke, *Phytologia* 4: 486--504 (1954) and 5: 6--7. 1954; *Biol. Abstr.* 28: 3196. 1954; *Trav. Lab. Bot. Syst. Brux.* 16: 66. 1955; *Assoc. Etud. Tax. Pl. Afr. Trop. Index* 1954: 66. 1955; Alain in León & Alain, *Fl. Cuba* 4: 279 & 294. 1957; Moldenke, *Résumé* 14, 27, 30, 31, 34, 41, 43--45, 49, 50, 54, 56, 58--61, 64, 65, 70, 79, 82, 87, 113, 118, 123, 213, 237--240, 277, 294, 318, 320, 342, 346--349, 353, 356, 358, 363, 364, 368, 372--374, 393, 394, 406, 416, 423, & 443. 1959; Moldenke, *Résumé Suppl.* 1: 7, 15, & 16. 1959; Angely, *Fl. Paran.* 15: 12 & 24 (1960) and 16: 42. 1960; Rickett & Stafleu, *Taxon* 9: 84. 1960.

In the Biological Abstracts reference cited above there is a report of an *Elsinoë* fungus occurring as a parasite on *Bouchea* in Cuba. Rickett & Stafleu (1960) place the genus *Bouchea* erroneously in the *Boraginaceae*. They state that the conservation of the generic name *Bouchea* Cham., *Linnaea* 7: 252 (1832), was actually superfluous because the earlier rival name *Denisaea* Neck., while first published in his *Elem. Bot.* 1: 306 (1790) was not validated under the present edition of the International Rules of Nomenclature until September 28, 1898, by Kuntze, *Rev. Gen. Pl.* 3 (3): 250.

#### BOUCHEA AGRESTIS Schau.

Additional literature: Moldenke, *Phytologia* 4: 488. 1954; Moldenke, *Résumé* 87, 238, 416, & 443. 1959.

Additional citations: BRAZIL: Minas Gerais: A. Lutz 30 (Z).

#### BOUCHEA BOYACANA Moldenke

Additional literature: E. J. Salisb., *Ind. Kew. Suppl.* 11: 34. 1953; Moldenke, *Phytologia* 4: 489. 1954; Moldenke, *Résumé* 65 & 443. 1959.

Additional citations: COLOMBIA: Cauca: Triana s.n. [Popayan] (Bn).

#### BOUCHEA CHASCANOIDES Moldenke

Additional literature: E. J. Salisb., *Ind. Kew. Suppl.* 11: 34. 1953; Moldenke, *Phytologia* 4: 489. 1954; Moldenke, *Résumé* 87 & 443. 1959.

#### BOUCHEA CIPOËNSIS Moldenke

Additional literature: E. J. Salisb., *Ind. Kew. Suppl.* 11: 34. 1953; Moldenke, *Phytologia* 4: 489. 1954; Mendes Magalhaes, *Anais V Reun. Anual Soc. Bot. Bras.* 254--255 & 303. 1956; Moldenke, *Résumé* 87 & 443. 1959.

The species is said to bloom from September to November. The paper by Mendes Magalhaes, cited above, describes the species as

"n. sp." at that point, but it was actually first validly described and published by me six years previous to that date in *Phytologia* 3: 261--262 (1950).

BOUCHEA FLUMINENSIS (Vell.) Moldenke

Additional synonymy: Verbena pseudo-gervão St. Hil. ex Walp., *Repert. Bot. Syst.* 4: 34, in syn. 1845. Bouchea luminensis (Vell.) Moldenke ex H. N. & A. L. Moldenke, *Anal. Inst. Biol. Mex.* 20: 3, sphalm. 1949. Verbena pseudogervão A. St. Hil. apud Rickett & Stafleu, *Taxon* 9: 84, in syn. 1960.

Additional literature: Walp., *Repert. Bot. Syst.* 4: 34. 1845; Stapf, *Ind. Lond.* 6: 429 & 431. 1931; Moldenke, *Alph. List Cit.* 1: 11. 1946; E. J. Salisb., *Ind. Kew. Suppl.* 10: 33 (1947) and 11: 34. 1953; Moldenke, *Phytologia* 4: 490--493. 1954; Rambo, *Sellowia* 6: 59, 67, & 153. 1954; Goodspeed & Stork, *Univ. Calif. Publ. Bot.* 28: 129. 1955; Moldenke, *Résumé* 79, 82, 87, 113, 118, 123, 213, 239, 347--349, 364, 368, 373, 416, & 443. 1959; Moldenke, *Résumé Suppl.* 1: 7 & 16. 1959; Rickett & Stafleu, *Taxon* 9: 84. 1960; Angely, *Fl. Paran.* 16: 42. 1960.

Illustrations: A. St. Hil., *Pl. Usuel. Bras.* pl. 40. 1826; Vell., *Fl. Flum. Icon.* 1: pl. 38. 1827; *Bot. Mag.* 102: pl. 6221 (in color). 1876.

The stem is described by some collectors as green with a purple hue, the calyx green, the corolla varying from blue to deep-purple, "pale-purple with a white center", or "violet and white". In addition to the habitats recorded previously, the species has also been found in waste land, along sunny paths and roadsides, and in tropical forests. Woytkowski describes the stem, calyx, and fruit as "slightly hairy", the lower part of the plant somewhat woody, or the calyx and stem "hairy", the leaves "soft, thick, velvety and covered with very short hair". He says that the plant is abundant in San Martín, Peru. Irwin found the species growing in red clay soil in the partial shade of secondary forests, common, with pale red-violet corollas; Pedersen found it in moist thickets by rivers; while Jürgens describes it as an erect branched evergreen, to 2.5 m. tall, somewhat woody, with dark-green leaves which are cooked with the young buds in the treatment of colds and to induce sweating. He found the species growing between bushes in sunny dry ground, on old cultivated ground of campos, at an altitude of 70 meters.

Additional citations: PERU: Junin: Ferreyra 382 (Ss), 3707 (Ss). San Martín: Klug 4206 (Ca--710174); Woytkowski 35004 (Ca--13825), 35105 (Ca--14022). BRAZIL: Gofas: Brade 15469 (B). Matto Grosso: A. Lutz 1452 (Lz). Minas Gerais: Irwin 2239 (W--2281285); Macedo 2044 (S). Rio Grande do Sul: Henz 35480 (N); Jürgens 105 (B); Rambo 48893 (Vi). Santa Catarina: A. Lutz 643 (Z); Reitz & Klein 3497 [Herb. Reitz 14213] (N, Sm). ARGENTINA: Corrientes: Pedersen 2914 (N). CULTIVATED: Brazil: Stellfeld 2336 (S).

## BOUCHEA FLUMINENSIS var. PILOSA Moldenke

Additional literature: Moldenke, *Phytologia* 4: 493. 1954; Moldenke, *Résumé* 87, 123, & 443. 1959; Angely, *Fl. Paran.* 16: 42. 1960.

Additional citations: ARGENTINA: Misiones: A. G. Schulz 2895 (Sz).

## BOUCHEA LINIFOLIA A. Gray

Additional literature: Moldenke, *Phytologia* 4: 494--495, fig. 1--6. 1954; Moldenke, *Résumé* 27, 30, 34, & 443. 1959.

Illustrations: Moldenke, *Phytologia* 4: 494, fig. 1--6. 1954.

E. F. Casteretter, in a letter to me dated January 31, 1955, states that in twenty-seven years of botanizing and collecting plants in New Mexico he has never seen this species in that state.

Additional citations: TEXAS: Val Verde Co.: Cory 41687 (N, We).

## BOUCHEA NELSONII Grenz.

Additional literature: Moldenke, *Phytologia* 4: 495. 1954; Moldenke, *Résumé* 34, 41, 239, & 443. 1959.

Steyermark describes the corolla as lavender, records the common name "vervena", and says that the boiled leaves are used for making an infusion for drinking 3 times daily in the treatment of malaria and chills. He found the plant growing on bald knobs.

Additional citations: GUATEMALA: Huehuetenango: Steyermark 51464 (N).

## BOUCHEA PRISMATICA (L.) Kuntze

Additional synonymy: Bouchea shrembergii Cham. ex Roig, *Dicc. Bot.* 2: 910 & 991, in syn. 1953. Bouchea prismatica var. prismatica [Alain] in León & Alain, *Fl. Cuba* 4: 294. 1957.

Additional literature: L., *Syst. Nat.*, ed. 10, 852. 1759; Moldenke, *Alph. List Cit.* 1: 2, 5, 7, 10, 11, 15, & 17. 1946; Standen, *Bol. Soc. Venez. Cienc. Nat.* 14 (78): 62. 1952; Roig, *Dicc. Bot.* 2: 910 & 991. 1953; Palacios Rincón, *Bol. Soc. Bot. Mex.* 17: 30. 1954; Moldenke, *Phytologia* 4: 495--498 (1954) and 5: 6. 1954; Alain in León & Alain, *Fl. Cuba* 4: 294--295, fig. 127. 1957; J. & G. C. Rzedowski, *Act. Cientif. Potos.* 1: 49. 1957; Moldenke, *Résumé* 31, 34, 41, 45, 49, 50, 54, 56, 58--60, 64, 65, 70, 79, 87, 213, 237--240, 277, 294, 318, 347, 349, 353, 356, 358, 372, 374, 394, 423, & 443. 1959.

Illustrations: Jacq., *Icon. Pl. Rar.* 2: pl. 208 (in color). 1788; Bocq., *Rev. Groupe Verbenac.* pl. 16. 1863; Briq. in *Engl. & Prantl, Nat. Pflanzenfam.* 4 (3a): 153, fig. 59 A & B. 1895; Knuth, *Handb. Blütenbiol.* 3 (2): 72. 1905; Alain in León & Alain, *Fl. Cuba* 4: fig. 127. 1957.

Collectors describe this plant as a spreading herb about 4 feet tall, the stem and roots woody, the flowers falling easily, and the corollas rose or purplish-pink. Allen says that the

flowers are pink-purple, with the center white, blooming in September. Alain calls the plant "verbena cimarrona", while Box says that it is infrequent and very local on limestone in Antigua. Standen reports it as the host plant for a species of Oidium.

The Jacquin reference cited above is often dated "1789".

Additional citations: CUBA: Oriente: Clemente 2668 (Z). LEeward ISLANDS: Antigua: Box 1197 (N). COLOMBIA: Antioquia: Daniel 3905 (F--1296264). Magdalena: C. Allen 517 (S). Tolima: Haught 6345 (W--2045947). VENEZUELA: Carabobo: Asplund 15104 (S). Federal District: H. Pittier 7887 (Vi).

BOUCHEA PRISMATICA var. BREVIROSTRA Grenz.

Additional synonymy: Stachytarpheta laxiflora Turcz., Bull. Soc. Nat. Imp. Mosc. 36 (2): 199. 1863.

Additional literature: Turcz., Bull. Soc. Nat. Imp. Mosc. 36 (2): 199. 1863; Hook. & Jacks., Ind. Kew. 2: 974. 1895; Moldenke, Alph. List Cit. 1: 13, 14, & 16. 1946; Rzedowski, Anal. Esc. Nac. Cienc. Biol. 8: 105. 1954; Moldenke, Phytologia 4: 498--499 (1954) and 5: 6. 1954; Rzedowski, Ciencia 15: 148. 1955; Moldenke, Résumé 27, 31, 34, 41, 45, 59, 61, 64, 65, 294, 320, 346, 347, 363, 393, 394, & 443. 1959.

Steyermark describes the corolla of this plant as lavender and records a common name "shep-úon". He found the plant growing at altitudes of 800 to 1200 meters, while Langenheim found it at 500 meters along railroad cuts in shrubby associations.

Additional citations: MEXICO: Federal District: G. L. Fisher s.n. [Tlalpam, Aug. 3, 1924] (Vi); Zamora, Paxson, & Barkley 16M902 (N). Tamaulipas: Stanford, Lauber, & Taylor 2302 (N). GUATEMALA: Huehuetenango: Seler & Seler 3072 (B); Steyermark 51588 (N). COLOMBIA: Norte de Santander: Linden 1350 (Z--photo, Z--photo). Santander: Langenheim 3001 (W--2266576).

BOUCHEA PRISMATICA var. LACINIATA Grenz.

Additional literature: Moldenke, Phytologia 4: 501. 1954; Moldenke, Résumé 34, 238, 368, & 443. 1959.

Matuda collected this plant at 750 meters altitude.

Additional citations: MEXICO: México: Matuda 31306 (Z).

BOUCHEA PRISMATICA var. LONGIROSTRA Grenz.

Additional literature: Moldenke, Alph. List Cit. 1: 6. 1946; Moldenke, Phytologia 4: 501--503. 1954; Alain in León & Alain, Fl. Cuba 4: 295. 1957; Moldenke, Résumé 14, 34, 43, 44, 49, 50, 54, 56, 58, 64, 65, 70, & 443. 1959.

Pittier describes this as an erect plant forming colonies in fertile waste places along roads; Glassman says that the flowers are light-blue and that the plant grows in the shade of trees in pine-oak forests. Yuncker describes it as an herb 2 feet tall, with lavender flowers in November. Holdridge describes the flowers as pinkish-purple, blooming in March, and the leaves lighter green beneath than above. Standley found the plant growing in

mimosa thickets.

Additional citations: HONDURAS: Morazán: Glassman 1869 (N, Ok, Ur); P. C. Standley 22161 (N). CUBA: Havana: León 540 (Vi). Oriente: Clément 7002 (Vi); Ekman 6213 (N). Province undetermined: León s.n. (Vi--1655). HISPANIOLA: Haïti: Holdridge 1042 (N). JAMAICA: Sangster 564 (N); Yuncker 17366 (Bm, S). VENEZUELA: Federal District. H. Pittier 7887 (Ca--923567).

BOUCHEA PSEUDOCASCANUM (Walp.) Grenz.

Additional literature: Moldenke, *Alph. List Cit.* 1: 8. 1946; Moldenke, *Phytologia* 4: 503. 1954; Moldenke, *Résumé* 87, 213, 238, 239, 347, 349, & 443. 1959.

Illustrations: Schau. in *Mart.*, *Fl. Bras.* 9: pl. 33. 1851; *Bot. Tidssk.* 8: pl. 2 (in color). 1874; Junell, *Symb. Bot. Upsal.* 4: fig. 29, 44, 46, 49, & 53. 1934.

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#### ADDITIONAL NOTES ON THE GENUS CASSELIA. II

Harold N. Moldenke

My original monograph of this genus was published in 1936 under the title "A monograph of the genus Timotocia" in *Fedde, Repert.* 39: 129--153, and the first supplement in 1947 as "Additional notes on the genus Timotocia. I" in *Phytologia* 2: 242--246. Since this time it has been found necessary because of the unfortunate policy of "nomina conservanda" adopted and maintained by the International Rules of Botanical Nomenclature to abandon the generic name Timotocia and to reinstate Casselia (1823) in spite of the earlier homonymous Casselia Dumort. (1822).

CASSELIA Nees & Mart., *Nov. Act. Physico-med. Acad. Caes.*

Leopold.-Carol. *Nat. Cur.* 11: 73, pl. 6. 1823 (nom. conserv.) [not Casselia Dumort., 1822].

Additional literature: *Jacks., Ind. Kew.* 1: 449. 1893; *Troncoso, Darwiniana* 5: 31--40, fig. 1--3. 1941; Moldenke, *Lilloa* 6: 434--435. 1941; Moldenke, *Alph. List Invalid Names Suppl.* 1: 4. 1947; *E. J. Salisb., Ind. Kew. Suppl.* 10: 233 & 251. 1947; Moldenke, *Phytologia* 2: 242--246. 1947; *H. N. & A. L. Moldenke, Pl. Life* 2: 22--24, 31, & 73. 1948; Moldenke, *Known Geogr. Distrib. Verbenac.*, [ed. 2], 93, 97, 163, & 197. 1949; *E. J. Salisb., Ind. Kew. Suppl.* 11: 178. 1953; Moldenke, *Phytologia* 5: 132. 1955; *Biol. Abstr.* 30: 4331 & 4397. 1958; Moldenke, *Résumé* 87, 113, 115, 116, 214, 250, 283, 354, 407, 423, & 445. 1959; Moldenke, *Résumé Suppl.* 1: 23. 1959; *Rickett & Stafleu, Taxon* 9: 84. 1960.

*Rickett & Stafleu*, in the reference cited above, erroneously place this genus in the Boraginaceae.